

## Three New Peaches on the Way

The sweet smell of peaches wafts through the air from a Georgia orchard, tickling the noses of passersby. In the distance, lush trees blaze with radiant red and yellow peaches. Fruits grown here are the crème de la crème of peach aristocrats. They're the work of horticulturist William R. Okie and others at the ARS Southeastern Fruit and Tree Nut Research Laboratory in Byron, Georgia.

Those orchards now include three newly released, sure-to-be-popular, ARS-developed peaches: Sureprince, Autumnprince, and Springprince. Sureprince is an attractive, firm peach that ripens in mid-June slightly after Juneprince, a popular commercial variety. It performs well in the colder parts of Alabama, South Carolina, and Georgia. Sureprince is no lightweight, weighing in at about one-third of a pound. Sure to melt in your mouth, the fruit has good texture and flavor.

Springprince and Autumnprince are both adapted to southeastern climates. Springprince ripens in late May, is very firm, and softens slowly on the tree, allowing it to have a very good flavor for an early peach. Autumnprince ripens in late August to early September, when most commercial peaches are finished.

All three varieties have moderate resistance to bacterial spot, with Sureprince being the most resistant.—By **Tara Weaver-Missick**, ARS.

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W.R. OKIE



**New ARS-developed Springprince peach at the Southeastern Fruit and Tree Nut Research Laboratory at Byron, Georgia.**

## TOPAZ Is a Topographic Gem

TOPAZ helps give farmers, engineers, scientists, and others a true lay of the land.

ARS hydraulic engineer Jurgen Garbrecht and professor Lawrence Martz from Canada's University of Saskatchewan developed the software as part of an international research effort to apply digital landscape technology to drainage- and runoff-related problems.

TOPAZ—short for topographic parameterization—is a computer-based evaluation tool that defines and analyzes land surface characteristics, watershed configurations, and drainage features. It has a range of analysis options and unique features that set it apart from commercial geographic information systems (GIS).

“TOPAZ has already gone global,” says Garbrecht. “Researchers, engineers, and educators in Europe, the Middle East, and North America are using it.”

ARS and USDA's Natural Resources Conservation Service are using the software to generate drainage path information needed for their water quality models. Canadian researchers are using it in their Global Energy and Water Cycle Experiment study of the Mackenzie River Basin—the second biggest river basin in North America—to better understand the role of cold regions in the global climate system.

Scientists from the International Water Management Institute are using TOPAZ for a modeling study of water-short basins in Turkey. And university staff are also using it as a teaching tool.

TOPAZ doesn't produce graphic pictures on the computer monitor, but it creates data files from which pictures can be generated by a commercial GIS package. Garbrecht says this is an advantage, because it allows the user to select preferred or existing display software without being forced to buy another package. He says, “TOPAZ provides the data in a basic format that is readable by most GIS systems, allowing for more flexibility.”

New capabilities are being developed and incorporated into the software to further broaden its application horizon. At this time, the scientists are working with the ARS Southwest Watershed Research Center in Tucson, Arizona, to add new features to TOPAZ for use by KINEROS, another ARS model that computes surface runoff and erosion.—By **Tara Weaver-Missick**, ARS.

*Copies of TOPAZ are available on request from Jurgen D. Garbrecht, USDA-ARS Grazinglands Research Laboratory, 7207 W. Cheyenne St., El Reno, OK 73036; phone (405) 262-4316, fax (405) 262-0133, e-mail garbrech@grl.ars.usda.gov. ♦*